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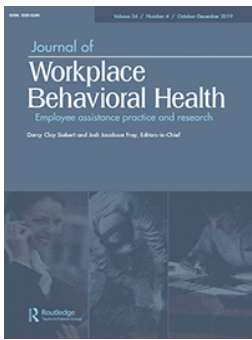
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Experiences and psychological strain in volunteer medical doctors providing medical visual examination for asylum seekers in a reception center in Germany – a qualitative interview study

David Kindermann^a, Carolin Schmid^a, Thomas Schell^b, Florian Junne^c, Markus Thalheimer^d, Judith K. Daniels^e, Wolfgang Herzog^a, and Christoph Nikendei^a 

^aDepartment of General Internal Medicine and Psychosomatics, Center for Psychosocial Medicine, University Hospital Heidelberg, Heidelberg, Germany; ^bPublic Health Authority, Rhine-Neckar-County and City of Heidelberg, Heidelberg, Germany; ^cDepartment of Psychosomatic Medicine and Psychotherapy, University Hospital Tübingen, Tübingen, Germany; ^dDepartment of Quality Management and Medical Controlling of the University Hospital Heidelberg, Heidelberg, Germany; ^eDepartment of Psychology, Division of Clinical Psychology and Experimental Psychopathology, University of Groningen, Groningen, Netherlands

ABSTRACT



Nearly 40% of the refugees arriving in Germany suffer from psychological traumatization. After initial accommodation in reception centers, German legislation requires that all refugees undergo a medical visual examination (MVE) to screen for infectious diseases. This examination is, in part, conducted by volunteering medical doctors. The present study aimed to analyze volunteering medical doctors' motivation for performing MVE, their connected experiences, and their psychological strain in a reception center. In this context, the emergence of secondary traumatic stress, vicarious traumatization, and the need for psychological support were explored. Semistandardized interviews were conducted with 18 medical doctors after they had performed MVE. Interview recordings were transcribed and subsequently underwent qualitative thematic analysis. Finally, thematic clusters were identified. The analysis revealed 512 relevant single codes, from which three main categories were derived. These ranged from private motives for volunteering to perform MVEs in a reception center setting, to thoughts and feelings after performing the examination, and the need for psychosocial support. After having performed MVE, some of the doctors displayed cognitive alterations, which can be an indication of vicarious traumatization. Most participants felt motivated to reflect on their personal beliefs and their moral concepts.

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CONTACT David Kindermann, MD  David.Kindermann@med.uni-heidelberg.de  Department of General Internal Medicine and Psychosomatics, Center for Psychosocial Medicine, University Hospital Heidelberg, Im Neuenheimer Feld 410, 69120 Heidelberg, Germany.

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Introduction

It is estimated that by the end of 2015, more 65 million people were forcibly displaced worldwide due to persecution, violence, and torture. Of these, 12.4 million were newly displaced in 2015 (UNHCR, 2015). Due to the growing number of conflicts and war around the world, an increase in the number of displaced people can be observed. In December 2015, the International Organization for Migration (IOM) confirmed the arrival of over 1 million refugees in Europe over the course of 2015, most of them coming from Syria and Africa (Migration, 2015). In this context, Germany is one of the main destination countries for new asylum seekers within Europe, as indicated by the rising numbers of applications for asylum registered by the Federal Office for Migration and Refugees (Bundesamt für Migration und Flüchtlinge [BAMF]). In 2015, 441,899 initial applications for asylum were submitted in Germany, mainly by people from Syria (35.9%), Albania (12.2%), and Kosovo (7.6%) (BAMF, 2015).

Studies show that newly arrived asylum seekers have a high prevalence of infectious diseases (Lee et al., 2013; Ravensbergen et al., 2016), particularly cases of *Plasmodium vivax* malaria (Sonden et al., 2014) and tuberculosis are common (Meier, Artelt, Cierpiol, Gossner, & Scheithauer, 2016). Despite the often-observed fears and existing stereotypes in the general population, the risk of infectious disease outbreaks in the general population due to refugees relocating to Europe is very low (Khan et al., 2016). This is largely explained by the fact that Europeans generally have a better nutritional and immunological status and has been demonstrated for tuberculosis agents in particular (Hargreaves et al., 2017; Kamper-Jørgensen et al., 2012; Khan et al., 2016). Studies investigating the mental health of refugees suggest significantly higher rates of posttraumatic stress disorder (PTSD) and depression in these individuals due to their experience of war, violence, and torture, as well as political and ethnic persecution. In a meta-analytic review, Steel et al. (2009) identified a prevalence of 30.6% for PTSD and 30.8% for depression among refugees, compared to a lifetime prevalence of 8.3% for PTSD (Kilpatrick et al., 2013) and 14.6% for depression (Bromet et al., 2011) in Western countries. Studies reach different conclusions concerning the prevalence of PTSD in asylum seekers (Bozogrmehr et al., 2016), spanning from 6.7% (Koch, Hartkamp, Siefen, & Schouler-Ocak, 2008) to 76.7% (Brune, José Eiroá-Orosa, Fischer-Ortman, & Haasen, 2014).

After arriving in Germany, refugees are sheltered in central reception centers (Landeserstaufnahmeeinrichtung [LEAS]) and are registered in a registration center (Registrierzentrum). German legislation further requires that

all refugees undergo an exploratory medical visual examination (MVE) (§62 of the German asylum law, Asylgesetz; ASylVfG, 2015). This examination aims to assess the asylum seekers' general physical condition and to identify primarily infectious diseases (e.g., tuberculosis, scabies, and lice), before they are transferred to communal shelters or residences. The MVE is a highly standardized procedure and comprises questions about current physical symptoms, acute or chronic diseases, and medication (Wahedi, Nöst, & Bozorgmehr, 2017). However, the exact steps vary in each German federal state. Due to the rising numbers of refugees arriving in the German federal state of Baden-Württemberg in 2015, the local health authority (Gesundheitsamt) asked the University Hospital of Heidelberg to provide administrative assistance to the central reception and registration center in Heidelberg. Subsequently, the hospital's medical doctors volunteered to perform the MVE. The examinations were supervised by the regional council, which is legally responsible for providing medical care to asylum seekers (ASylVfG, 2015).

In the reception center, the refugees who have potentially experienced terrifying violence, torture, or death of close relatives come into contact with medical doctors, social workers, interpreters, employees of aid organizations, and volunteers. Within this framework, reception center staff can directly or indirectly learn about the refugees' personal background stories and their traumatic experiences. Therefore, the encounters can result in psychological stress for the staff (Denkinger et al., 2018; Kindermann et al., 2017). A special type of this psychological strain is the so-called secondary traumatic stress (STS) (Figley, 1995). This concept can be defined as PTSD symptoms, for example, intrusions and hyperarousal, being transmitted from a "primarily" traumatized individual to an initially nontraumatized individual due to close contact (Daniels, 2008; Figley, 1995). Another concept is vicarious traumatization (VT), which also refers to the consequences of being exposed to traumatic narratives and can result in changes of an individual's cognitive schemas of self, of others, and of the world in general (Baird & Kracen, 2006; McCann & Pearlman, 1990). These changes are described as being adaptive reactions. However, the exposed individual's basic needs for safety, trust, esteem, intimacy, and control are disrupted (Pearlman & Saakvitne, 1995). Apart from these cognitive changes, individuals with VT may also suffer from affective and posttraumatic symptoms; however, the latter symptomatology is not obligatory for VT (Sabin-Farrell & Turpin, 2003). The occurrence of STS and VT in trauma therapists and emergency personal has been comprehensively investigated in several research studies (Dominguez-Gomez & Rutledge, 2009; Pearlman & Mac Ian, 1995). However, it remains elusive whether medical doctors who perform the MVE can learn directly or indirectly about the refugee's

personal fate – even though this examination is highly standardized and aimed at identifying infectious diseases. Furthermore, it is not clear whether this knowledge could lead to psychological strain, STS, or VT. Possibly, some of the doctors ask the refugees directly about their flight. Although the procedure of the MVE itself is standardized in each federal state, it is not off-limits to ask additional questions about the refugees' mental health and history. Furthermore, even without knowing the specific personal background stories, some doctors may identify traumatized individuals due to their outward appearance, for example, wounds or scars from war injuries or torture. This could trigger doctors' imagination on what might have happened to the individual refugee.

Therefore, the present study focuses on the experiences and concerns of medical doctors who voluntarily perform the MVE in a German reception center. Furthermore, we were interested in the doctors' psychological strain and whether they showed signs of STS or VT. We conducted semistandardized interviews and subjected the transcripts to in-depth thematic analysis (Mayring & Gläser-Zikuda, 2008). Our aim was to assess the personal, medical, and interactional experiences of the medical doctors. A further goal was to find out what kind of psychological support could be offered to medical doctors working with possibly traumatized individuals to maintain and promote the doctors' personal health.

Methods

Study design

The present study has a qualitative, prospective, exploratory design. Qualitative data were acquired directly after the doctors' MVE shifts by means of semistandardized interviews that were subsequently transcribed and thematically analyzed (Mayring & Gläser-Zikuda, 2008).

Procedure of MVE

The procedure of the MVE performed in the reception center in Heidelberg is highly standardized: After greeting the refugee, the doctor evaluates whether a computerized translation program or an interpreter is necessary. Then, the refugee is asked about specific physical symptoms, such as cough, fever, pain, cardiac conditions, diabetes or skin conditions (e.g., pruritus). Additionally, the doctor inquires after their medical history and preexisting conditions, medication, signs of pregnancy, and addictions. In the event of finding evidence for an infectious disease, the doctor will initiate further diagnostic steps to be able to start the appropriate therapy and prevent the further spread of the disease within the reception center.

Table 1. Sociodemographic characteristics of the medical doctors, displaying age, gender, years of medical experience, medical specialty, number of shifts in reception center, and possible previous experiences with refugees.

Sociodemographic characteristics of volunteer doctors $n = 18$	
Variable	M (SD)
Age [years]	34.8 (7.0)
Gender [f / m]	Female = 9 male = 9
Years of medical experience [years]	7.4 (5.7)
Medical specialty [non-surgical / surgical]	Nonsurgical = 15 surgical = 3
Number of shifts in the reception center [n]	1.7 (0.8)
Previous experiences with refugees [yes / no]	Yes = 1 no = 17

Sample

The study sample is made up of medical doctors working at the University Hospital of the University of Heidelberg, Germany (see Table 1). We invited all 32 volunteering medical doctors performing the MVE at the central reception and registration center in Heidelberg to participate in this study; 18 gave informed consent which equals a response rate of 56.2%.

Setting

A trained interviewer conducted semistandardized interviews confidentially in a shielded area on the premises of the University Hospital of the University of Heidelberg. The interviews were audio-taped and transcribed verbatim for qualitative thematic analysis.

Procedure and design

The audio data was transcribed for subsequent thematic analysis (TA) (Mayring & Gläser-Zikuda, 2008). This is a pragmatic approach to qualitative analysis that enables analyzers to focus on searching for overarching themes in a given data set. The thematic analysis aimed to generate thematic clusters within the content of the interviews, indicating the medical doctors' experiences and concerns in the context of the MVE in a reception center setting. Our specific research questions are reflected in the semistandardized interview questions, as well as in the themes and categories which were generated in the thematic analysis.

Development of questions

In line with the “consolidated criteria for reporting qualitative research”-checklist (COREQ; Tong, Sainsbury, & Craig, 2007), we developed the interview questions and hypotheses on the basis of an in-depth literature review and a discussion among a team of experts ($N = 4$; one female, three male, all

experienced in psychotherapy training and research). Afterwards, we conducted preanalytic, open interviews with *two* doctors after they had performed the MVE. Herein, we asked general questions about their current experiences in the refugee camp to identify significant topics. Next, we adapted our interview questions according to the findings of these preanalytic interviews. The final interview manual was constructed in a semistandardized manner (Flick, 2002; Helfferich, 2005; Hill et al., 2005; Knox & Burkard, 2009) and contained 10 main open questions, followed by encouraging and clarifying questions if required (see Table 2). The main open questions addressed the medical doctors' experiences and concerns before, during, and after their MVE shifts in the reception center. A trained interviewer performed the individual face-to-face interviews according to the semistandardized interview manual. The interviewer was supervised by experienced researchers who had already conducted similar studies. All interviews were recorded on audiotape.

Qualitative thematic analysis and statistical analysis

After verbatim transcription of the 18 semistandardized interviews, we performed a thematic analysis (Mayring & Gläser-Zikuda, 2008): First, we undertook a line-by-line, open coding of all the transcripts to identify possible recurring topics. Next, we identified single sentences or longer passages as a code, representing the most elementary unit of meaning (Braun & Clarke, 2006). Then, the codes were summarized into relevant topics for each participant, using the software MaxQDA (2010 version, VERBI GmbH, Berlin). Certain topics were recurrent among several participants, so that we could compare and adapt them until we had defined a number of relevant topics for all of the participants. Two independent analyzers assigned the respective codes to specific topics. They discussed their coding to reach consensus (investigator triangulation) and made adjustments if necessary. In the final step, the topics were consolidated into three relevant categories.

Ethics

The participation in this study was voluntary, all participants were sufficiently informed about the purpose of the study and granted anonymity and confidentiality regarding their data. In addition, we obtained written consent from all participants. Ethical approval was granted by the ethics committee of the University of Heidelberg (No. S-694/2015). The study was conducted in accordance with the Declaration of Helsinki (Helsinki, 2013).

Table 2. Interview questions for the doctors, encompassing main open questions, encouraging questions and clarifying questions.

Main open questions	Encouraging questions	Clarifying questions
<p>Main open question 1</p> <p>What kind of reasons did encourage you to voluntarily work in a reception center for refugees?</p>	<ul style="list-style-type: none"> • Have there been inner motivations? • Have there been external reasons? • Did you discuss those reasons with colleagues, family, or friends? 	<ul style="list-style-type: none"> • Which actual inner motivations encouraged you? • Which actual external reasons encouraged you?
<p>Main open question 2</p> <p>How did you imagine the reception center in the forefront of your commitment?</p>	<ul style="list-style-type: none"> • How did you imagine the buildings of the reception center? • How did you imagine the environment of the reception center? • How did you imagine the contact with the refugees in the reception center? 	<ul style="list-style-type: none"> • What kind of associations did you have? • What kind of reaction of yourself did you anticipate? • Did you anticipate difficult situations or joyful moments?
<p>Main open question 3</p> <p>What kind of experiences did you actually make during your commitment in the reception center?</p>	<ul style="list-style-type: none"> • How did you actually experience the buildings of the reception center? • How did you actually experience the environment of the reception center? • What kind of atmosphere did you experience in the reception center? • How did you actually experience the contact with the refugees in the reception center? • Did your impressions change in the course of your different commitments? 	<ul style="list-style-type: none"> • What kind of associations have been evoked, working in the reception center? • Did the refugees tell you about their personal background stories? • What kind of feelings did you experienced while working with the refugees? • Did you experience challenging situations? • Did you experience joyful moments?
<p>Main open question 4</p> <p>What kind of clinical experiences did you make during your commitment?</p>	<ul style="list-style-type: none"> • What kind of disorders have you been concerned with? • Has there been a difference between disorders being diagnosed by you in the reception center in comparison to your usual workplace in the hospital? • Has there been medically challenging situations for you? 	<ul style="list-style-type: none"> • What kind of medical or psychological disorders did you find? • How did you experience treating possibly rare diseases or diseases, you do not have much expertise with?
<p>Main open question 5</p> <p>What kind of thoughts or imagery have you been concerned with in the aftermath of your commitment(s) in the reception center?</p>	<ul style="list-style-type: none"> • Which thoughts or memories have you been concerned with the most? • How did you handle your experiences of the reception center? • Do you feel burdened by the experiences you made? 	<ul style="list-style-type: none"> • Did you have conversations about your experiences? • Did you demand any support to get along with your experiences? • What experience was most burdening for you? • Why has this experience been burdening for you?
<p>Main open question 6</p> <p>In what manner did your experiences in the reception center possibly change your own concepts or ideals?</p>	<ul style="list-style-type: none"> • In what manner did the experiences changed your political position? • In what manner did the experiences changed your moral point of view? • In what manner did the experiences changed your ideals? 	

(continued)

Table 2. Continued.

Main open questions	Encouraging questions	Clarifying questions
Main open question 7 How did your personal attitude or perspective concerning refugees and flight change due to your experiences?	<ul style="list-style-type: none">• Could you describe your “former” view on refugees in the forefront of your commitment?• Could you describe your “new” view on refugees now, after your commitment?	
Main open question 8 In your opinion, what kind of support do doctors need, working in medical visual examination in a reception center?	<ul style="list-style-type: none">• What kind of psychological support do they need?• What kind of medical support do they need?• What other support do they need?	
Main open question 9 What kind of changes should be made, if you continue to work in the reception center?	<ul style="list-style-type: none">• Are there structural or organizational difficulties, which could be optimized?• Are there difficulties concerning hygiene and safety, which could be improved?• Would you even continue to work in the reception center?	<ul style="list-style-type: none">• If you do want to continue working in the reception center, what reasons can you give?• If you do not want to continue working in the reception center, what reasons can you give?
Main open question 10 What kind of final conclusions can you draw from your experiences in the reception center?		

Results

Main categories and themes resulting from qualitative analysis

To present the data obtained from the semistandardized interviews with the doctors after performing the MVE, we follow the approach suggested by Huwendiek et al. (2009). With regard to the qualitative analysis of the interview transcripts, 512 relevant single codes were identified. From these codes, the following three main categories were derived: (A) private motives and expectations prior to the assignment, (B) actual experiences while performing the MVE, and (C) thoughts, feelings, and the need for psychosocial support after performing the MVE. Below, we describe these main categories in more detail and give citations for further illustration.

(A) Private motives and expectations prior to the assignment [120 codings]

The interviewees presented a wide range of different motives for volunteering to perform the MVE, which can be roughly differentiated into four categories: a) feeling occupational and/or moral duty, b) being curious about or interested in the current refugee issue, c) looking for an opportunity to

participate in giving aid, and d) having experienced flight and displacement themselves or as part of their family's history.

- a. Some of the doctors highlighted their occupational as well as moral duty to provide medical assistance in a reception center. Living in a prospering and safe country, many physicians felt responsible to aid and support those who had escaped from war and terror in their home countries. By this, the doctors wanted to contribute to a successful integration. Furthermore, some of the study participants stated that due to medical ethics they were obligated to help people suffering from disease and pain,

“In fact, I became a doctor to give aid to people who really need medical support” [A1.0] and “The major suffering of people who are coming to this country as refugees is affecting me intensely. I would like to contribute my medical expertise to their aid” [A1.7].
- b. Some of the doctors also described that they felt a kind of professional curiosity and wanted to form their own view on general politics concerning refugees. In this context, interviewees often mentioned the role of the media concerning the refugee situation,

“For me it was important to not just ignore the refugee issue but rather to actively contribute somehow. That was the main motivation” [A1.17] and “It was mainly curiosity, to gather some experiences, aside from television or the media in general. So, I just wanted to know: What is truly going on here?” [A1.8].
- c. Some interviewees reported that the opportunity to get involved in giving aid to refugees was a significant reason for volunteering to perform the MVE in a reception center. The physicians pointed out the compatibility of their shifts in the reception center with their shifts in the hospital, which encouraged them to participate,

“Working in [real name of the reception center removed by the authors] offered the possibility to gain first experiences within the secure framework of the university hospital while being covered by insurance” [A1.7].
- d. Finally, a small proportion of doctors explained that there were experiences of displacement or flight in their own family history. The interviewees had been told about these experiences, which mainly took place at the time of the Second World War, by their parents or grandparents. This had encouraged them to volunteer to perform the MVE,

“Both of my grandparents were refugees after the Second World War, too; somehow this issue has been present in my family. My mother grew up in camps, as well. So, the issue has always been present” [A1.1].

Aside from these motivations, the interviewees' answers displayed a distinct variety of expectations in the forefront of their work in the reception center: The doctors often imagined the reception center to be a small, functional town and anticipated structured procedures. Concerning their communication with the refugees, interviewees had ambivalent expectations: The majority assumed that conversations would be superficial, professional, and strictly adhering to the MVE's standardized questions regarding main symptoms, "Right at the beginning it was clear that it is supposed to be a visual examination. I know how a visual examination works; there won't be close contact with the asylum seekers" [A1.10].

In contrast, others anticipated that besides asking questions about main physical symptoms, they would get the opportunity to find out more about the personal history of the asylum seekers and the background stories of their flight, "In fact, I expected to get into conversation with the refugees. Where did they come from? Personal background stories. What reasons made them flee? What did they experience during their flight?" [A1.13].

Apart from that, the doctors often expected to encounter translation problems, even though they were aware of interpreters being available. Some of the doctors feared intercultural problems, especially concerning gender roles. And a small number of the interviewees were worried about the possible presence of infectious diseases, particularly tuberculosis or scabies, and the absence of proper hygienic equipment, "[I was afraid] because I heard that there are actually a lot of cases of multidrug-resistant tuberculosis and I did not know if my own safety would be guaranteed" [A1.2].

In addition, some of the participants worried that the refugees would suffer from serious psychological traumatization. The doctors questioned their ability to identify and handle such conditions professionally, "I expected there to be a lot of sick or traumatized patients" [A1.7], "I would assume that on average, they [refugees] experienced more traumatization" [A1.1], "Concerning the refugees, there may be serious and difficult diseases which are challenging to manage; [I worry] that [the diseases] cannot be adequately treated" [A1.9], "What do I have to expect [in the central reception center]? What do I have to do? What skills do I need? Am I able to meet the requirements?" [A1.13], and "Can I succeed? Is my medical education good enough? Or do I arrive there and realize my hands are tied because there are just way too many things which I am not able to master and do not know about?" [A1.16].

(B) Actual experiences while performing the MVE [245 codings]

The physicians described various experiences which they had during the MVE. Often, they questioned significance and meaning of the MVE due to

the absence of a physical examination and due to the fact that the MVE is a highly standardized procedure which evokes a feeling of bureaucracy:

Somehow it was senseless; in fact, “senseless” is not the correct word, but ...; the more commitments I had, the more I had to stamp: on the front side or the back side of the card and once again anywhere else. At some point you get the feeling that it is all about the stamps. It does not matter who is sitting in front of you, it is just all about the stamps.” [A1.12]

Regarding the organization of the procedure, some of the doctors indicated intermittent chaos and unclear conditions. Some of the interviewees described an aggressive, shattering, and depressing atmosphere in the examination room, “Sadly, the first word I use when talking about my experiences, is “shattering” [A1.13] and “It is extremely desolate and miserable; not comfortable. The second time everything was muddy, there was laundry hanging over the barbed wire; everything is wet and cold. That is really ... you do not feel comfortable in this place” [A1.2].

Others described a friendly, warm, and lively atmosphere, “Concerning the atmosphere, I had the feeling that everybody was basically content and that they had somehow arrived, literally” [A1.9] and “The children were friendly and smiled. Thus, I was in a friendly and positive mood, too” [A1.16].

Some of the doctors reported that they had some negative experiences while performing the MVE. They thought that some of the refugees did not tell them about potentially serious conditions for fear of jeopardizing their asylum process. Furthermore, some physicians were appalled by the stories the refugees told about their experiences in their home countries or their flights, “You don’t need much intuition to comprehend what it means if a newly arrived young woman is carrying a 2-week-old baby, telling you she started her flight 3 months ago” [A1.2], “Mainly, when I saw the mothers with their little children ... I myself have small kids” [A1.15], and “They showed us videos of their flight by boat over the Mediterranean Sea” [A1.3].

Problems of verbal communication and translation were also frequently mentioned, “Communication was often difficult. There were just these interpreters who were refugees themselves” [A1.3], “I was surprised about how big the language barrier was in fact. A lot of refugees could neither speak English nor French; so I often had to rely on the support [of an interpreter]” [A1.11], and “There was a huge language barrier; just a few refugees spoke English, but most of them could not speak any language I knew. So I actually had to use gestures” [A1.16].

Some interviewees described friendly and particularly grateful asylum seekers. Thus, performing the MVE left the physicians with positive feelings of respect and a sense of achievement, “The asylum seekers were open-minded and very friendly, too. I was positively surprised” [A1.6] and

“Everybody was friendly and they were able to accept it if further examination was necessary” [A1.3].

Moreover, the physicians asserted that the rate of serious physical conditions in refugees was much lower than they had estimated in advance. The majority of doctors stated that they encountered explicit differences between their usual patient consultations and the consultations with the asylum seekers. These differences mainly concerned the shortness of contact, the general setting of the MVE, or communication problems.

(C) Thoughts, feelings and the need for psychosocial support after performing the MVE [147 codings]

This category encompasses the physicians’ thoughts, feelings, and needs, which they experienced in the *aftermath* of working in the reception center. In retrospect, some interviewees reported consternation due to the fate and the background stories of the refugees, especially when children were involved:

[In the aftermath] I was really affected; especially by the young males from Afghanistan, Iraq, and Syria, who displayed battlefield injuries: wounds caused by fragmentation bombs, cuts, and sometimes gunshot wounds, which are, of course, healed by now. But they have secondary damage ... because of having been beaten, tortured and so on. [A1.12]

Actually, the individual background stories continue to have an effect [on me]. I imagine a family man, packing up his whole family, saying: ‘We’re going to Europe right now!’ [A1.13]

The interviewees reflected on their feelings, their perspectives on themselves, and on the world in general. Some of them reported feeling powerless, “It affected me a lot. I was at a loss with this whole issue ... and felt helpless” [A1.3], “For me, it [the assignment in the refugee camp] was an opportunity to confront myself with a reality, which usually takes place outside of my everyday life” [A1.9], “In fact, I have great concerns. I am afraid of how Germany will get along with this whole issue [...]. Actually, I am afraid of the future” [A1.10]:

On the first shift, I was personally affected. The pictures I had seen on television or in the newspapers became even more realistic. From an outside perspective, you often perceive the refugees to be a great mass of people, but then, due to the assignment, you realize that there are in fact individual stories. This makes the problem even bigger, because we have a million people here, with individual fates; every person had their own reasons to flee, with all the strain they experienced on their way. You can’t even imagine what it’s like ... those people are in their early twenties. You can’t even imagine what it’s like for the refugees, when you are a young European with plans for the future.” [A1.12]

You try to put yourself in the refugees’ position. All of them were younger than me and nobody of them has ever had any perspective in life. This is a fundamental problem of the refugees. But I won’t solve it; we won’t solve it at all. This is so upsetting. [A1.13]

I realized that it [shifts in refugee camp] affected me a lot. I realized that the refugees are completely uprooted, staying in an entirely foreign country. But in the course of the day, it gets more normal. You stop reflecting upon individual stories. Then everybody is just a number. [A1.13]

I felt entirely powerless; you just can't do anything. I can only contribute a little. But I cannot solve this whole problem. [...] This is a condition, which I just cannot change; and I know, that I have to accept it. Sadly, this is a fact. [A1.15]

Moreover, a large proportion of the physicians were frustrated by the local organization and procedures at the central reception center, observing that the MVE proceeded in a random manner. Some physicians were disillusioned by their own limited scope to offer support to the asylum seekers.

Nobody can start a conversation asking about nightmares or mental stress. One reason is, that at that moment I just don't have the time. Even if I had the time, I would not be able to draw any consequences from what I hear. Thus, it would just be pathetic to ask about these symptoms. [A1.12]

Some interviewees pointed out the significance of communicating their negative experiences during medical visual examination to relatives on the one hand, and colleagues on the other hand, "It is always pleasant to talk about it with somebody. It is challenging, because you cannot just forget it" [A1.0], "You come home, frustrated and sad, but the next day the chief physician or your colleague tells you: 'This is interesting. I appreciate your commitment.' This is helpful" [A1.2], and "I received a lot of positive feedback from my colleagues who had a lot of questions" [A1.2].

On the contrary, another part of the doctors reported positive individual reactions, stating their assignment to be an important personal experience which evoked feelings of contentment and the certitude of being able to offer proper support. Rather than changing their worldview, they felt that performing the MVE and encountering different life stories confirmed their personal attitudes and perspectives. These physicians indicated that they wanted to become even more involved in supporting the asylum seekers.

In general, I was glad I had an assignment. Somehow, I felt satisfied that I was involved in an issue you usually just watch on television, and that I was able to give some aid, even if it was minimal. [A1.15]

"My moral convictions have not changed. They have rather been confirmed" [A1.10] and "I don't think that my worldview has changed. But the whole issue has become 'more real' to me, because now it has a face" [A1.12].

Having performed the MVE, the interviewees reported being more aware of refugees in everyday life. Furthermore, they saw their own issues and problems from a new perspective, by contrasting them with the asylum seekers' experiences of war and their flight.

How trivial are the issues we are concerned with in our personal life! How privileged we are! I was just totally happy. Afterwards I got in my car and drove back to my ideal world with my job and prevented it [memories of medical visual examination] from coming into my mind - but they [asylum seekers] still have to stay there [reception center]. So, I don't think it has influenced me strongly, but in the first days I was thinking a lot about it ... and I realized how privileged we are. [A1.13]

Some physicians indicated the need for psychosocial support in the aftermath of their shifts, especially when they were working in a reception center for a longer period of time. A few of them preferred the opportunity for voluntary, low-threshold supervision.

I would appreciate the possibility of supervision, especially if working with the refugees gets more intensive and you don't just ask about 4 or 5 symptoms. If you perform the medical visual examination more often, you just need to exchange experiences with others. [A1.8]

In contrast, another share of the physicians did not think that psychosocial support was necessary. In their opinion, such proposals were more relevant for nonmedical individuals, *"I probably would not ask for such an offer [psychosocial support]. I don't think I need it because I didn't experience anything traumatic"* [A1.0].

Ultimately, some of the physicians were skeptical whether the asylum application in general was organized in an appropriate way. They thought that further improvement and modification was necessary and emphasized how important it was to integrate refugees quickly and properly into our society.

Discussion

The present study aimed to explore what motivation medical doctors had for voluntarily performing the MVE in a German reception center, what their experiences were during and after this task, and if they showed signs of psychological strain. In our interviews we revealed that the doctors were affected by the refugees' background stories. Most of the participants reported that they increasingly reflected on their personal beliefs and their view on the world in general. Several doctors found that their own living circumstances had gained a new perspective. Even though some of these reactions can be an indication of VT in terms of changes in cognitive schemas, we have to emphasize that the methodology of the present study does not allow us to make any diagnosis; rather, we focused on the subjective reactions of the respondents which cannot be classified by means of psychopathological categories.

Some of the respondents indicated that they had felt the duty or even the obligation to give aid, which had been an important motivation to

voluntarily sign up to perform the MVE in the refugee reception center. For some of them, this was closely associated to their perceived role as a medical doctor: The Hippocratic Oath demands that medical doctors should “help the sick” (Edelstein, 1943). In this context, the occupational duty can be seen as a strong extrinsic motivation (Amabile, 1993), which arises within the socially constituted role of a medical doctor and comprises a set of versatile expectations. However, some participants also reported feeling the moral duty to give aid to the refugees. This refers to moral convictions as an intrinsic motivation (Skitka, Bauman, & Sargis, 2005). The moral convictions may partly be triggered by the great social inequality that the doctors perceive: On the one hand they encounter traumatized refugees who left everything behind, and on the other hand the participants themselves are part of the “comfortable” Western society. Through a process of empathic engagement, respondents were able to partly identify with the refugees’ situation, subsequently leading to actions to change those unequal conditions (van Zomeren, Postmes, Spears, & Bettache, 2011). A few of the doctors also indicated that experiences of flight and expulsion in their own family history had been important motivations for them to voluntarily perform the MVE. Those experiences mainly referred to their grandparents’ or parents’ displacement during the Second World War. Various investigations already showed that stressful experiences or trauma not only affect the exposed individual’s mental health or worldview, but can also be transferred in a transgenerational manner (Bowers & Yehuda, 2016; Schwab, 2010). Due to their grandparents’ experiences of flight, the participants probably had a greater interest to engage with people who also suffered from displacement. By this, the respondents may have found an opportunity to deal with their family history and eventually with their own “family identity” (Bennett, Wolin, & McAvity, 1988). To summarize the above mentioned motivational aspects, we can assume that intrinsic factors seem to be a strong incentive to engage in the support of refugees.

Concerning issues of communication, the doctors participating in this study expected different issues to come up: On the one hand, they assumed that there would be a superficial, professional conversation with the focus on main symptoms and complaints. At the same time, they worried about the refugees suffering from serious psychological trauma. In this context the standardized structure of the MVE can also be seen as a protective measure because it ensures that the doctors remain at an emotional distance to the traumatic narratives of the refugees. On the other hand, some of the participants reported to have a great interest in the refugees’ personal background stories and seemed to commiserate with their fate. In summary, although most of the participants seemed to worry about different aspects of their prospective working place, their self-concept was

fortified by the above mentioned intrinsic motivational factors. These motivational factors, then, played a central role in how the doctors anticipated their work in the reception center.

Working in the reception center was appraised in various, sometimes ambivalent ways and from different perspectives: On the one hand, the terrain of the central reception center was often described as “desolate,” “miserable,” or even “shattering.” This seems to be partly linked to structural factors, such as the high barbed wire fence around the area of the reception center and the impersonal accommodations; both aspects sometimes even evoked depressing associations to concentration camps. In addition, most of the respondents had their MVE shifts during winter, which perhaps intensified the above-mentioned negative or bleak perceptions of the reception center. Moreover, many doctors described the MVE as a highly bureaucratic and standardized procedure. They felt that the results gained through the examination were reduced to mere stamps on administrative cards, a mechanical process that caused them to feel disillusioned. Finally, the rising numbers of refugees arriving at the reception center in 2015 and the initial absence of standard procedures for several administrative tasks in the reception center could be an explanation for some of the participants perceiving the reception center as chaotic. On the other hand, actually meeting the asylum seekers face-to-face was frequently depicted as a friendly and warm encounter. Combining the depressing surroundings and the cordial personal consultation, we can imagine how highly contradictory the experiences of the doctors were. Nevertheless, some doctors also used the word *shattering* to portray their reactions to the background stories the asylum seekers told them about. Particularly if children were involved, most of the doctors felt immense psychological strain, especially if they themselves were fathers or mothers. Even in the days after their shifts in the reception center, many doctors reported feeling unsettled by the refugees’ life stories. In this regard, they often contrasted the refugees’ biography and present living conditions to their own, “comfortable” way of life. This gave many of them a feeling of injustice due to the great disparities.

Some interviewees seemed to reflect on the experiences they had while performing the MVE for days or even weeks after their assignment. They often felt helpless or powerless, not being able “to solve the whole problem” [A1.15]. Furthermore, many participants found it deeply unsettling to realize that “the refugees” are not just a homogeneous mass of people, but that every refugee has an individual background story and individual plans for the future. Some respondents said they were afraid of the future because they had no idea how Germany could cope with such a great number of incoming refugees. The responses described above reflect how

certain cognitive schemas of the participants changed, so that they thought differently about themselves, the refugees and the world in general. Moreover, some doctors seemed to have undergone disruptions in their basic needs for safety, trust and control. Taken together, those results can be an indication for VT in terms of changes in cognitive schemas (Baird & Kracen, 2006).

However, we did not find these changes in cognitive patterns in every participant. Some of the medical doctors highlighted how their assignment and the warm, friendly encounters with the refugees had encouraged them to reflect on their worldview in a positive way. Different concepts have been developed to describe an individual's positive emotional and cognitive changes after having experienced stressful events or trauma, or after having found out about another person's traumatic experiences. In this regard, *posttraumatic growth* refers to positive psychological alterations and stress-related growth after primarily encountering traumatic experiences (Tedeschi & Calhoun, 1996, 2004). Another related concept is vicarious resilience (VR). VR represents the transmission of a primarily trauma-experienced individual's resilience, in terms of personal growth and empowerment, to a nontraumatized person (Hernández, Gangsei, & Engstrom, 2007). Thus, VR depicts the antithetic concept to VT. However, none of the respondents reported feeling personal growth or empowerment; rather, they described unchanged conditions or a confirmation of existing personal attitudes and perspectives concerning themselves and the world in general. Eventually, we can assume that individual factors may play an important role in determining whether doctors develop cognitive alterations in terms of VT, whether they can reflect positively on their experiences after performing the MVE or whether they report unchanged conditions. However, there need to be further investigations on these presumed individual factors and their roles in triggering VT.

Aside from those considerations, it is of major interest in which particular way the doctors may be exposed to potentially traumatizing situations and experiences while performing the MVE as a highly standardized procedure. Apart from directly asking about the refugee's fate in a conversations or the anamnesis, we have to take into consideration that there are possible indirect ways of finding out about traumatic experiences. Thus, even a standardized procedure may expose doctors to traumatic experiences and result in VT in terms of changes in cognitive schemas. In this regard, visual and physical imagination seems to play an important role (Canfield, 2005; Iliffe & Steed, 2000; Krans, Näring, Holmes, & Becker, 2010): Especially if doctors did *not know* the specific background story of a refugee, but noticed war injuries or other wounds during the consultation, their imagination could be triggered, causing them to imagine what had

happened (Lam-Hesseling, 2002). This process can be described as a projective imagination of the “observer” that is based on feeling empathy (Davis, 2018). This assumption is in accordance with previous findings which show that individuals with high degrees of empathy are more prone to suffer from VT (Figley, 1995; MacRitchie & Leibowitz, 2010). Therefore, we have to consider direct and indirect ways of learning about traumatic content when analyzing the possible development of distress and VT within different working contexts.

If we combine our results with previous findings about VT, we may draw important conclusions regarding health aspects of different workplaces, which display a risk of being exposed to distressing or traumatic experiences in different degrees. In the first place, the assessment of risk factors has to be adapted so that individual vulnerability of employees is taken into consideration. Moreover, a regular supervision with a trained psychotherapist should be offered, so that employees can talk about their personal distress and emotional responses to the background stories of their clients. Within those regular supervisions, employees showing signs of emotional strain or even VT could be identified at an early stage so that they could receive appropriate psychosocial support.

Limitations

Several limitations of this study should be mentioned: First, due to the exploratory nature of our research project as well as the fact that only physicians from the University Hospital of the University of Heidelberg were invited for the interviews, the generalizability of our findings may be restricted. Second, the interviews represent a qualitative methodology which is generally susceptible to bias, such as that caused by the influence of the interviewer. We tried to counteract this by using an experienced interviewer who received feedback and support from other experienced colleagues. However, we cannot rule out the possibility that some relevant aspects may not have been mentioned in the interviews.

Conclusions

In the present study, some of the medical doctors performing MVE in a central reception center displayed cognitive alterations, which can be an indication of VT. The results represent subjective reactions in a specific working context and cannot be interpreted in terms of diagnostic categories. Most of the respondents felt motivated to reflect on their personal beliefs as well as their moral concepts. Regarded in the context of previous investigations, our findings underline the importance of taking into consideration individual risk profiles of employees. Furthermore, it is crucial to

keep in mind specific characteristics of different workplaces in which the employees could possibly be exposed to distressing or even traumatic experiences – either in a direct or in an indirect way.

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ORCID

Christoph Nikendei  <http://orcid.org/0000-0003-2839-178X>

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